

Application No. 10/764,615

REMARKS

This amendment is filed in response to the Office Action dated October 7, 2005 in which claims 1, 2, 4, 6 and 8-16 are rejected and claims 3, 5, 7 and 17 are objected to. Claims 5, 6, 8 and 17 are hereby amended to more clearly describe the invention as claimed. Claims 1-4, 15 and 16 are hereby canceled without prejudice or disclaimer. New claims 18-35 are hereby added. Reconsideration and allowance of the pending claims is requested.

Claims 1, 2, 4, 6 and 8-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,248,248 to Adley in view of U.S. Patent No. 6,362,768 to Younis et al. and U.S. Patent No. 5,470,218 to Hillman et al. Applicants respectfully submit that the cited references in combination fail to teach or suggest the inventions of claims 1, 2, 4, 6 and 8-16. However, in order to provide focus on aspects of the invention that Applicants consider to be most pertinent, claims 1-4, 15 and 16 have been cancelled without prejudice or disclaimer. Applicant respectfully requests reconsideration and allowance of claims 6 and 8-14 for the reasons set forth below.

Claim 6 is directed to an apparatus for monitoring a production process performed by a production machine. The apparatus of claim 6 includes a plurality of module slots for receiving various types of sensor modules, a processing device, an interface circuit, a display device and an input device. The processing device performs a method of monitoring the production process. The steps of this method include (a) identifying the type of sensor module installed in each of the module slots, (b) calibrating the sensor module installed in each of the module slots, (c) acquiring a stream of data from the sensor module installed in selected ones of the module slots, (d) processing the stream of data and (e) generating a visual presentation for the stream of data.

It is stated in the Office Action that the Adley patent, by reference to an "Allen Bradley PLC controller," inherently discloses a processing device that identifies the sensor module installed in each of the module slots. To support this, the Office Action cites Figure 3 of U.S. Patent No. 4,510,565 to Dummermuth. Applicants respectfully disagree to the extent that neither the Adley or Dummermuth patents inherently or explicitly disclose a processing device that identifies *the type* of sensor module installed in each of the module slots.

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Based on the disclosure of the Dummermuth reference taken as a whole, it is apparent that it is not necessary for the processing device of the Dummermuth system to identify the type of I/O module installed. As shown in Figure 3, the modules (18) always receive encoder inputs on certain terminals and tachometer inputs on certain terminals. (See also Figure 13.) Because there is no uncertainty in the Dummermuth system as to the type of sensors connected to the modules, there is no need to identify the type of sensor module installed. Thus, Adley and Dummermuth do not disclose or suggest a processing device that identifies *the type of sensor module* installed in each of the module slots as required by claim 6 as amended.

It is stated in the Office Action that the Adley reference does not disclose a calibration function, but that Figure 3 of the Younis reference does. Applicants disagree to the extent that Younis does not disclose a processing device for calibrating sensor modules installed in module slots. Younis merely describes using a calibration signal to test the system with a known or variable voltage. (See 5:17-19.) Younis does not describe how this calibration signal is applied or controlled. Younis does not describe or suggest applying or controlling the calibration signal using a processing device. Thus, Younis does not describe or suggest a processing device for calibrating a sensor module as required by claim 6.

The Hillman reference also does not disclose a processing device that (a) identifies or (b) calibrates a sensor module as required by claim 6.

Hence, the combination of the Adley, Younis and Hillman references does not provide the processing device required by claim 6. Therefore, claim 6 patentably defines over the cited combination of references. Reconsideration and allowance of claim 6 is requested.

Claims 7-14 depend on claim 6 and define additional important aspects of the invention. Therefore, Applicants submit that claims 7-14 patentably define over the combination of Adley, Younis and Hillman for at least the same reasons as set forth above for claim 6. Reconsideration and allowance of claims 7-14 is requested.

Applicants note with appreciation that claim 7 would be allowable if rewritten in independent form to include all of the limitations of claim 6. Applicants request that the objection to claim 7 be

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held in abeyance until the examiner has an opportunity to reconsider the allowability of claim 6 in light of the discussion above.

Applicants also appreciate the examiner's indication that claims 5 and 17 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 5 and 17 have been so amended. Reconsideration and allowance of claims 5 and 17 is requested.

Applicants submit that new claims 18-35 introduce no new subject matter to the application. Support for new claims 18-25 may be found in paragraphs [0015], [0029] and [0045] and in Figures 4-6 of the present application. Support for new claims 26-29 may be found in paragraphs [0035] and [0025] and in Figure 18. Support for new claims 30-31 may be found in paragraphs [0029] and [0043]. Support for new claim 36 may be found in paragraph [0030] and in Figure 11. Support for new claim 33 may be found at paragraph [0028].

Paragraph [0056] of the specification has been amended to correct some typographical errors therein. No new matter is added to the specification by this amendment.

In light of the foregoing discussion of the claims of the invention and the cited references, Applicants respectfully submit that a full and complete response to the Office Action is provided herein, and that all of the pending claims are now in condition for full allowance. Action in accordance therewith is respectfully requested.


If the Examiner identifies further issues that may be resolved by telephone, the Examiner is invited to contact the undersigned at (865) 546-4305.

In the event this response is not timely filed, Applicants hereby petition for the appropriate extension of time and request that the fee for the extension along with any other fees that may be due with respect to this paper be charged to our Deposit Account No. 12-2355.

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Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below to Fax No. 571-273-8300.

Date: December 30, 2005


Mark P. Crockett